In order to determine approximately the limits of variation of the coefficients which enter into the preceding formula they have been computed for two particular cases.

Assuming 0 m 30 as the depth of the layer of gas flowing under the crest of the weir, this will correspond approximately to # = 0 m 45, for which the minimum length of the sill or width of crest *E* is 0 m 30 (-§•/?) and the maximum width of crest will be in the neighborhood of 1 m (about 2/f); from which, applying formula (7), for the first case ju= 1.045 and for the second case AI=0.838. It may be assumed that these values will be the same for a gas flowing under an inverted weir.

Actually, whatever the value of this friction for a gas, it will be less than the friction of water, but it can be assumed, as a first approximation, that this difference will be compensated for by the greater friction of the free surface of the gas against the medium which is at rest.

Therefore, the value of *H* being very nearly 0 m 45 and that of *E* being 1 m, the following expression is obtained:

$$Q = Q.322BPlJ2glI\hat{}\sim\hat{}\ldots\ldots\ldots(8)$$

Then, assuming that M = MI> for the case in which *h* is Om 30 and *E* is 1 meter, the expression will be

$$= \hat{}—°\text{-}^{8}38B\hat{}2(7\hat{} \quad . \quad (9)$$

$$Q$$

If the current of gas which is flowing under the weir and the gas medium through which it flows have the same chemical composition it can be admitted that

$$\frac{A\hat{}r,}{A_m \quad T}$$

t representing the temperature.

By taking Ao = 1 kg 29, the weight of a cubic meter of air when

it is at the temperature of 0°, that is to say when 2^ = 273°, it will be found by Formula (9) that